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In the Claims:

Replace the following like-numbered claims:

5. (amended) A method of detecting variations in a spatially correlated parameter comprising:

measuring a selected parameter of each of a plurality of electronic circuits replicated on a common substrate;

calculating a difference between a value of the selected parameter at a target location and that of an identical relative location with respect to the target location for each of the plurality of electronic circuits to generate a distribution of differences;

calculating an absolute value of the distribution of differences;

calculating an average of the absolute value of the distribution of differences to generate a representative value for the residual for the identical relative location; and

performing a lot averaging for each wafer X-Y coordinate so that a new set of best estimates is re-calculated for each X-Y position.

6. (amended) A method of detecting variations in a spatially correlated parameter comprising:

measuring a selected parameter of each of a plurality of electronic circuits replicated on a common substrate;

calculating a difference between a value of the selected parameter at a target location and that of an identical relative location with respect to the target location for each of the plurality of electronic circuits to generate a distribution of differences;

calculating an absolute value of the distribution of

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differences; and

calculating an average of the absolute value of the distribution of differences to generate a representative value for the residual for the identical relative location wherein the common substrate comprises a plurality of common substrates wherein best estimates for a given X-Y location are identical to those of a corresponding location on another of the plurality of common substrates.

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Add the following new claims:

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11.(new) The method of Claim 1 further comprising performing a lot averaging for each wafer X-Y coordinate so that a new set of best estimates is re-calculated for each X-Y position.

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12.(new) The method of Claim 1 wherein the common substrate comprises a plurality of common substrates wherein best estimates for a given X-Y location are identical to those of a corresponding location on another of the plurality of common substrates.

13(new). The method of Claim 12 further comprising re-ordering the plurality of common substrates in a same order in which they were processed.

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REMARKS

Claims 5 and 6 have been amended as suggested by the examiner to overcome the objection. Claim 7 now includes all the limitations of amended Claim 6 to overcome the objection.

New Claims 11, 12 and 13 have been added.